

REMARKS

The above amendment and these remarks are responsive to the Office action of 9 Mar 2005 by Examiner Lalrinfamkim Hmar Malsawma.

Claims 1-6 are in the case.

Restriction

Restriction has been required. Applicants elect to the claims of Group I, claims 1-6, without prejudice. Claims 7 and 8 have been withdrawn.

Claim Objections

The Examiner has objected to claim 2 as informal.

Applicants have amended claim 2 to correct the informality as suggested by the Examiner.

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35 U.S.C. 103

Claims 1-6 have been rejected under 35 U.S.C. 103(a) over Suzuki, U.S. Patent 5,598,029.

Regarding claim 1, the Examiner rejects the claim because Suzuki shows a method for wiring the decoupling capacitor to the power supply lines. However, the method proposed by Suzuki expressly limits the parasitic resistance due to the wiring method (column 3, lines 54 - 56 and column 4, lines 4 - 7). The fixed resistance formed by the contacts is purely due to the number of contacts used.

"The parasitic resistance can be suppressed small by shortening the length and thickening the width of the electrode of the bypass capacitor... Further, since the value of the parasitic resistance which is connected to the bypass capacitor is small, the effect of eliminating the power supply noise is great."

[Suzuki, Col. 3, lines 54-56, and Col. 4, lines 4-7.]

Applicants purposely add parasitic [to use Suzukik's term] resistance [that is, in Applicants' terminology, fixed

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resistance formed by contacts connecting the polysilicon layer to a first voltage level buss and the diffusion layer to a second voltage level buss] to protect surrounding circuits in the event there is a defect shorting the VDD and GND plates together. The current draw through the defect in the event of a short would render the chip useless. Also, the resistance added is due to where the contacts are placed and not how many contacts are used.

The Examiner points out that the term "sufficiently high" is relative. That would be true, but for the fact that Applicants' claims clearly recite exactly how high is sufficient. That is, the term "sufficiently high" is qualified by the phrase "...to suppress noise on said first and second busses to a value which achieves bus stability". Those of skill in the art understand that placement (location, separation) of the contacts to achieve the result of bus stability and noise suppression is dependent upon structural and circuit parameters which in any particular configuration may be determined with reference to the claims and specification without undue experimentation.

Regarding dependent claims 2-6, Applicants purposely add resistance, whereas the parasitic resistance in the

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design described by Suzuki is negligible. Applicants' design allows the protection resistance to be built into the layout of the capacitor without adding a discrete resistor element in series with the capacitor to the layout. If there is a short between the VDD and GND plates, Applicants' design would have the same current-limiting ability as a prior art design that would include a discrete resistor element. However, in such a design, that resistance is there whether or not the leakage protection is required. The calculation of the RC factor that determines the noise suppression ability of the decoupling capacitor in Applicants' design would use a resistance value half that of the protection resistance. This means Applicants' design is able to suppress more noise than a prior art design that includes a discrete resistor element.

This is why Applicants' claims include the RC factor, the bandwidth limiting resistance VS the leakage protection resistance, etc.

Because Applicants are purposely adding resistance, the design is very different from the one described by Suzuki. The design described by Suzuki would never be able to do any of this because he is trying to minimize the parasitic

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resistance. There is no protection if his VDD and GND plates were to short together.

Consequently, Applicants argue, Suzuki teaches away from the invention described and claimed by Applicants.

Applicants urge that claims 1-6 be allowed.

SUMMARY AND CONCLUSION

Applicants urge that the above amendments be entered and the case passed to issue with claims 1-6.

The Application is believed to be in condition for allowance and such action by the Examiner is urged. Should differences remain, however, which do not place one/more of the remaining claims in condition for allowance, the Examiner is requested to phone the undersigned at the number provided below for the purpose of providing constructive assistance and suggestions in accordance with M.P.E.P. Sections 707.02(j) and 707.03 in order that allowable claims can be presented, thereby placing the Application in

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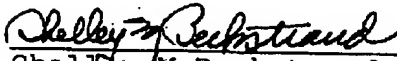
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condition for allowance without further proceedings being necessary.

Sincerely,

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By


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